

Acclaimed African Immunity or Resistance to Sars-Cov-2: Explore or Ignore?

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Dear Editor,

Towards the end of the year 2019 and early 2020, the world was thrown into chaos as a result of a monster virus that is ravaging the world, called severe acute respiratory syndrome 2 (SARS-CoV-2) or Coronavirus disease 2019 (COVID-19). There is nearly no country in the world that the claws of this most dreaded coronavirus SARS-CoV-2 have not made an impact, although to a varying degree. Over 63 million infected cases and more than 1 million deaths have been recorded across the globe as of 30th November 2020 (1). On January 30, 2020, this virus was pronounced a Public Health Emergency of International Concern by the World Health Organization (WHO) and afterward pronounced pandemic on March 11th, 2020 by the same body (2).

The negative impact of this virus on the 'giant' countries of the world was alarming. Despite their well-developed health care delivery system, the influx of infected patients was overwhelming and the mortality rate was traumatic (3). As of November 30, 2020, the United States of America (USA) has recorded 13,750,608 COVID-19 infected cases with 273,077 deaths; Brazil 6,314,740 infected cases with 172,848 deaths; India 9,432,875 infected cases with 137,177 deaths and United Kingdom (UK) 1,617,327 infected cases with 58,245 deaths among other giant countries of the world (1). Hospitals in the USA and other developed Western countries were overwhelmed to the extent that corpses were abandoned to putrefy in homes and by the roadsides (4).

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COVID-19 in Africa

As the rates of infection and mortality become geometric especially in the developed countries, series of predictions were made that Africa, a continent with many developing countries will suffer the most from the damaging effect of the COVID-19 pandemic (4). These predictions were based on dilapidated health care delivery system and the high poverty level that are endemic in the region (3,4). Surprisingly, Africans seem to have watered down these predictions as the claws of the virus seem to have spared them as compared with other continents (4,5). While countries like the USA, Brazil, India are recording millions of infected cases and the death toll in hundreds of thousands, the whole African continent with about 54 countries have only recorded 2,177,263 infected cases and 51,831 deaths as of mid-November 2020 (1). The question is, are Africans truly immune or resistant to SARS-CoV-2 as acclaimed?

Acclaimed Immunity by Africans

One of the reasons for the acclaimed Africans immunity to COVID-19 is as a result of the low reported cases of infection and mortality. This is coupled with several myths and misinformation concerning the COVID-19 pandemic in Africa which have made most Africans negligent on COVID-19 safety measures and a contributory factor to the increase in the infection rate. Besides, the corruption surrounding COVID 19 in developing countries of Africa makes an average citizen believe COVID-19 is a 'rich or white man's disease' and the figures of reported cases were jacked up for the government's selfish gain from the international organization. Notwithstanding, the continent's acclaimed immunity should not be dismissed without solid scientific proof.

First, the testing capacity for COVID-19 by African countries must be evaluated. This is one of the claims by the international communities as it is visible to the blind that African countries' testing capacity for COVID-19 is too low when compared with other continents. As of 16th November 2020, an African country like Nigeria with a population of over 200 million had tested just 756,237 of its population (less than 1%) (1). Egypt, where the index case in Africa was detected, had tested just one million out of the over 100 million population (about 1%). South Africa is the country with the highest record of testing as it has conducted over 5 million tests out of about 60 million population (close to 10%) (1). Combining these records in the three African countries mentioned, their testing capacity is less than 4% of the COVID-19 tests conducted in the USA alone with a record of over 190 million tests out of about 331 million population (about 50%) (1). Until the testing capacity of African countries is satisfactory enough, the true state of Africans as regards SAR-CoV-2 infection cannot be ascertained. Nonetheless, according to the WHO, the period for SARS-CoV-2 incubation is on an average of 5-6 days but might be up to 14 days. Therefore, if truly the testing capacity in Africa is below par and the period for SARS-CoV-2 incubation is between 1-14, then, dead bodies should have littered the streets of Africa as predicted or there should have been a surge in hospitalization as seen in the USA (4). Besides, the index case of the COVID-19 patient in Africa was recorded on 14th February 2020 in Egypt; Nine months down the line, the COVID-19 infection, and the death rate are still very low in Africa when compared with other continents. Hence the source of the acclaimed immunity or resistance to SARS-CoV-2 is worth exploring.

Moreover, before the roll-out of some vaccines for SARS-CoV-2, one of the recommended drugs by the US Food and Drug Administration (USFDA) and some researchers in treating people with COVID-19 is chloroquine (CQ) and hydroxyl chloroquine (HCQ) (5). Although the World Health Organization has kicked against this that the drug causes other heart-related problems and USFDA also revoked its earlier directive on the usage of CQ and HCQ as research is ongoing (5,6). Notwithstanding, Prodromos and Rumschlag argued in their recent research that early administration of HCQ seems to be consistently effective for the treatment of SARS-CoV-2 (7). Prodromos et.al also supported their argument with the fact that HCQ is protective to the heart by reducing cardiac mortality. It helps to reduce thrombosis and cholesterol in the case studied (8).

Going down memory lane, chloroquine is a very familiar drug in Africa. This drug has been used in treating malaria disease caused by mosquitoes such as *Plasmodium falciparum* that is endemic in the region for decades (5). Malaria is an age-long familiar or common sickness in Africa but might be life-threatening in some climes. Could the age-long usage of Chloroquine have provided a form of immunity or resistance for Africans? This needed to be explored as well. Kewel and Tanuj (5) reinforced their argument that the carrier of sickle cell hemoglobin, which is an inherited pair of a mutated hemoglobin cell (homozygous, HbSS) is also resistant against *Plasmodium falciparum* malaria (5). This type of sickle hemoglobin is rare in the white race but peculiar in Africans. Exploring the relationship between chloroquine, malaria disease, sickle cell resistance, and SARS-CoV-2 might give a better insight into the low frequency of SARS-Cov-2 in Africa.

Furthermore, research also revealed that Vitamin D is among the supplement used in treating SARS-CoV-2 patients (9). According to a case study, over 80% of the 200 COVID-19 infected patients studied had vitamin D deficiency leading to an increase in blood inflammatory markers (9). Vitamin D helps in adjusting the immune system by suppressing dangerous cytokine production. During the 1918-1919 influenza pandemic, the death rate seems to have been lowered as a result of sunlight and vitamin D (9). Could it be that exposure of Africans to sunlight might have given them some shots of Vitamin D when compared with cold continents where the coronavirus death toll is alarming?

As a result of the dilapidated healthcare delivery system in Africa, Africans have developed other alternatives to care for themselves, especially through the use of traditional medicine. Self-medicating with traditional medicine may not necessarily be an accurate cure for the particular disease but might have helped in boosting the immune system. Fortification of the immune system through the daily routine of traditional medicine could also help to fight major infections as minor. This has been an African heritage, although the scientific community has undermined their traditional medicine as the correct dosage measurement is poorly developed.

Conclusion

As some Western countries are planning to go on a second lockdown owned to the second wave of SARS-CoV-2, African countries are yet to record a quarter of what was experienced in the first wave by some states in the Western countries. Some scientists have even argued that the strain of the coronavirus in Africa is weaker and less lethal strains without concrete

proof. Understanding Africans genetic make-up, history of past epidemics and pandemics, alternative or traditional medicine, and weather conditions could be of great help towards managing and producing a more effective SARS-CoV-2 vaccine. Unless proven otherwise, the self-acclaimed immunity or resistance to SARS-CoV-2 by Africans should be explored and not ignored. Researching into every issue raised here will go a long way in combating the COVID-19 pandemic globally. COVID-19 is real and might have come to stay pending when the vaccines will be readily available and accessible globally. Personal hygiene and other safety protocols must be taken with high consciousness as we navigate through the COVID-19 pandemic.

Disclosure of interest

The author declares no competing interest.

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